



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

App. No.:	10/733,533	Att'y Docket:	EH-10965 (03-435)
Filing Date:	December 11, 2003	Conf No.:	7730
Inventor(s):	Blake C. Chenevert et al.	Group Art Unit:	3749
Assignee:	United Technologies Corporation	Examiner:	Josiah C. Cocks
Title:	SOOT BLOWER ACCESS APPARATUS		

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Reply Brief under 37 CFR 41.41(a)(1)

This Reply Brief is submitted in reply to the Examiner's Answer dated May 16, 2006.

The Answer expands on the interpretation of Tanca. As is described below, this interpretation fails to yield many of the claim elements for which the Answer asserts Tanca. These relate broadly to a combustion conduit with fuel/oxidizer sources. Clearly, other references would show combustion conduits with fuel and oxidizer sources. However, no combination would yield the claimed methods. The references to the location of the second valve based upon unsupported modifications of the steam apparatus of Kakabaker and the Japanese reference are illogical and in conflict with several of the claims.

Kakabaker

In the final paragraph of page 3, Kakabaker is characterized. It is asserted that "valve (16) that is opened to release superheated steam... is considered to be the claimed second valve." This is revisited below.

The Japanese Patent

The Japanese patent was combined with Kakabaker. It is not seen what Kakabaker adds to the Japanese patent. Valve 29 of the Japanese patent, as described in the manual translation attached to the Answer would appear redundant with Kakabaker's 16.

Tanca

At the second full paragraph of page 5, it appears that the examiner is relying on an embodiment of Tanca wherein the combustible fuel product gas from the gasifier itself is returned for soot blower use. It was then asserted that these "are considered to be the combustion gases, and fuel/oxidizer mixture claimed. Further, these combustion fuel gases would serve to 'detonate' when ignited."

This reasoning and statement suffer from several defects:

- The Answer appears to confuse Tanca's "combustible" with "combustion".
- There is no evidence that ignition/initiation (and resulting combustion), let alone detonation (as distinguished from non-detonative combustion) occurs in Tanca and no suggestion therefor. The lack of combustion is supported by the passage cited in the final paragraph of page 5 of the Answer wherein it was asserted to "desirably preserve the heating value of the fuel gas when the device is used in a coal gasifier..." Combustion would defeat this goal of Tanca of reintroducing fuel to the gasifier.
- No oxidizer component has been identified for such gas.
- Combustion (if any – assuming a minute incidental combustion in the reactions within the gasifier) would occur only after the gas reenters the vessel. Under that interpretation, there is no combustion conduit, merely a gas conduit.
- Thus, generally, Tanca does not deal with a combustion gas, but a pressurized gas that happens to be otherwise useful as a fuel

Thus, the Answer's interpretation fails to yield: the "combustion conduit" of claim 12 along with the use and implicit location of the second valve therein; the explicit second valve position of claim 18; the introduction of fuel/oxidizer, generally, and the location of claim 19; the location of fuel/oxidizer mixing of claim 20; the initiating of claim 21; the detonation of claim 22; and the location and sequence of conduit section installation of claim 23.

Response to Argument Section

In the Response to Argument section, at page 6, the Answer, a manual translation of the Japanese patent was identified.

At the bottom of page 6, the assertion that Kakabaker and the Japanese patent are in the same field of endeavor does not provide a suggestion to make a pick-and-choose combination and repositioning of their features and operations. Only in the absolute broadest of sense are they similar in structure, operation, or purpose in that they may be termed "soot blowers". Their particular structural and operational details are substantially different. The assertion at the second paragraph of page 8 that the Kakabaker valve 16, Japanese patent valve 27 [sic] and Tanca valve 29 [sic] are "for the same purpose" also appears erroneous and irrelevant.

It appears the more analogous Japanese patent valve would be 29. In any event, the main deficiency comes in the modification relative to Tanca and unsupported further modifications for which there is support in none of the references. Appellants are at a loss to find element 29 in Tanca. As noted above Tanca FIG. 1 identifies a gas (that happens to be a fuel) as a blowing medium which is introduced through a valve labeled 24. This is discussed further below.

The present apparatus/methods, however, involve a combustion conduit and use of combustion gases for cleaning. This is substantially different from the use of mere pressurized gases such as Kakabaker and the Japanese patent (which use steam) on the one hand and Tanca (which uses gasified coal) on the other. This is discussed further below.

At page 8 it was asserted that "The valve (16) of Kakabaker (illustrated in Fig. 1) functions to hold back and release steam and has been equated to the second valve of applicant claims..." Answer, page 8, second paragraph. As noted above, the application of Tanca is insufficient as failing to teach combustion gases. Even if applied to a combustion apparatus in the family of which the present apparatus generally falls, there is no suggestion to position a valve to block the combustion gases. There is no suggestion to add to Tanca, a valve other than 24 (which holds back the gas). The analogous valve in a combustion conduit system would be the valve(s) that are positioned at the upstream end of the combustion conduit to introduce fuel and oxidizer. The fuel and oxidizer valve(s) are thus also similarly positioned to the valves that hold back the steam. The Answer's hypothesized valve positioned to block combustion gases

would thus be the "yet another valve" discussed in the paragraph spanning pages 8 and 9 of the Answer and for which there is no suggestion in the Japanese reference. Furthermore, the Answer's asserted function of holding back and releasing the combustion gases is explicitly in conflict with claims 19-21. It is also logically in conflict with operation of a combustion cleaning apparatus generally and the detonation of claim 22. The Answer proposes a role wherein the valve is closed, manages to block the combustion gases produced by the detonation and then, having survived the detonation, is opened.

The assertions starting at the final paragraph of claim 9 and extending through page 12 involve several levels of bootstrapping. First, they are asserted to follow from hypothesized valve positionings which, as noted above, are not themselves suggested. Second, the assertion at page 11 that these "would be obtainable through routine experimentation... to result in the desired cleaning" is unsupported. The asserted support merely was that "the timing of the steam injection is variable". Answer, page 11, second paragraph. This merely relates to when one operates the device not a particular sequence of steps. The particular sequence of steps, was not inherently an optimizable domain for providing desired cleaning. The steps interrelate with the unsuggested structure of the apparatus and its basic operation. Only upon looking at details of the exemplary embodiment of the present apparatus, could one infer the particular sequence of steps, if at all.

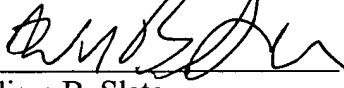
At page 13 of the Answer, it was asserted that the Kakabaker "supply pipe (20) (see col. 3, lines 38-40) suggests attaching an upstream conduit section as recited in appellant's claim 23." Answer, page 13, first paragraph. However, there is no suggestion for the temporal order. Also, there is no suggestion for the supply pipe as teaching attaching an upstream section of the combustion conduit. If anything, the supply pipe would teach subsequent coupling of fuel and oxidizer supply lines to a combustion conduit.

The assertion at the second paragraph of page 13 that element 15 of Kakabaker somehow has a conduit-like role is irrelevant. It does not have any suggestion for the claimed combustion conduit.

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Appellants request that the fee for filing this Reply Brief be charged to Deposit Account No. 21-0279. Please charge any deficiencies or additional fees which may be required hereunder and credit any overpayments to Deposit Account No. 21-0279.

Respectfully submitted,

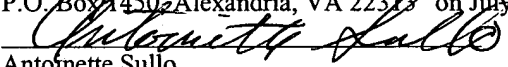
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